DOCUMENT RESUME

ED 317 040 FL 018 348

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TITLE Cooperative Learning for LEP Students.
INSTITUTION Intercultural Development Research Association, San Antonio, Tex.
PUB DATE Sep 89
NOTE 8p.
PUB TYPE Information Analyses (070) -- Journal Articles (080)
JOURNAL CIT Intercultural Development Research Association Newsletter; v16 n9 p1-7 Sep 1989

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Bilingual Education; *Classroom Techniques; *Cooperative Learning; English (Second Language); High Risk Students; *Limited English Speaking; Metacognition; Second Language Instruction; Teacher Role; Transitional Programs

ABSTRACT

Substantial evidence suggests that students working together in small cooperative groups can master material better than students working on their own, and that cooperative learning structures higher self-esteem and learning motivation. Cooperative learning (CL) has been proposed for use with language minority children, as well as with other at-risk students. This method offers advantages for primary language instruction, whole language approaches, English as a Second Language (ESL) and transition to English, sheltered instruction and critical thinking, development of cognitive and metacognitive strategies, and classrooms with few limited-English-proficient (LEP) students. Several CL models have targeted bilingual classroom settings, using different focuses: group investigation and cooperative integrated reading and composition. Effective implementation of CL instruction requires that: (1) students be prepared for cooperative work; (2) teachers understand the change in their role from transmitter of knowledge to mediator of thinking; (3) each student in a team have a specific and meaningful role; (4) debriefing be incorporated into instruction; (5) evaluation be consistent and clear; (6) teachers be well trained in appropriate teaching strategies and classroom management techniques; and (7) an ecology for professional growth and instructional improvement be in place in the school. A 50-item bibliography is included. (MSE)

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IDRA newsletter

VOL. XVI, NO. 9 SEPTEMBER 1989

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Cooperative Learning for LEP Students

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Written for the Desegregation Assistance Center - South Central Collaborative

The Importance of Cooperative Learning

Substantial evidence is now available that students working together in small cooperative groups can master material better than can students working on their own (Slavin, 1988). Joyce and Showers (1988) report as part of their meta-analysis on the most common teaching strategies, that research on cooperative learning is "overwhelmingly positive." Cooperative learning methods are considerably **more effective than traditional methods** in increasing basic achievement outcomes, including performance on standardized tests of mathematics, reading and language arts, social studies, and science (Slavin, 1983; Slavin, 1988).

Researchers (Johnson and Johnson 1986 and 1988; Slavin 1988) have also found that cooperative learning structures promote higher **self-esteem and greater motivation** to learn. Self-esteem has been found to be significantly higher for all students, but particularly for students at risk when they participate in cooperative learning classrooms.

Cooperative learning strategies also teach the skills of the future. Cooperative skills are the cornerstone of our future economy, global peace, and the basic family structures. Cooperative skills will help our students maintain a stable family, successful career, friendships, and a peaceful environment. The social and interpersonal relationship skills developed through cooperative methods will develop the leadership **skills of the future**, particularly in those bright students who have great difficulty relating to other students. Educators are now called upon to prepare students for a very different world. To succeed, students must learn to communicate and work well with others within the full range of social situations, especially within situations involving fluid social structures, human diversity, and interdependence. **The age of cooperation is here (Iacocca, 1988; Drucker, 1989),** not just in global economics, business, and industry but in education as well. All over the world, teachers and administrators are discovering an untapped resource for accelerating students' achievement — the students themselves.

Why Cooperative Learning for LEP Students?

As with other at-risk students, cooperative learning (CL) has often been proposed for use with language minority children (California State Department of Education, 1986; Cohen and De Avila, 1983; Calderón and Marsh, 1988; Cummins, 1989). Because CL seemed such a promising approach, the federal government funded a five-year project to study CL effects on linguistic, academic, and social skills development of LEP students. This study is being conducted in the Ysleta Independent School District in El Paso, Texas and in Santa Barbara, California, under the auspices of the Johns Hopkins Center for the Study of Education for Disadvantaged Students. Preliminary findings from that study are summarized in this paper.

Benefits of Cooperative Learning for LEPS

Some of the characteristics of CL that appeal to teachers of LEP students in bilingual, ESL, and mainstreamed classes are the following:

1. CL can be used with students of all ages.
2. CL can be used with students of all levels of language proficiency (pre-production, early production, speech emergence, oral fluency).
3. Students with diverse backgrounds are not placed at a disadvantage when it comes to reading, writing, communication and critical thinking.
4. Students (particularly those identified as Levels 4 and 5) fine-tune their language skills and develop learning strategies for mastering content.
5. Older pre-literate students gain knowledge of the structure of the English language in a safe and non-threatening way. They also learn how ideas are expressed orally and in written form.
6. CL can be easily integrated with content area instruction, i.e., science, social studies, math, etc.
7. CL can be used in bilingual instructional settings where students learn in two languages.
8. CL can be used in combination with ESL instructional strategies in elementary and secondary ESL classes.
9. CL is fundamental for "sheltered content" classes in secondary schools.
10. CL is an effective management tool as well as an instructional strategy for mainstreamed classrooms where bilingual programs are not possible.
11. CL helps LEP students develop a positive image of themselves and others, enhances positive ethnic relations, and curtails discipline problems (Calderón, 1989).

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Cooperative Learning and Primary Language Instruction

Cooperative learning consists of a myriad of teaching strategies which develop social, academic, and communication skills. CL strategies such as paired reading, treasure hunts, team writing, and team products allow students to begin reading and writing in their first language almost immediately. Students quickly realize that they all have something to contribute and that their ideas are valued and encouraged by peers and teacher. Finding Out/Descubrimiento gives teachers a tool for teaching math and science in the primary language.

Cooperative Learning for Whole Language Approaches

Cooperative learning methods can be used with literature-based approaches to reading. Cooperative Integrated Reading and Composition (CIRC), as modified for LEP students, takes a whole language view of learning and integrates student experiences with exciting pieces of literature. The CIRC process can also be adapted to basal readers and content area textbooks in the primary language. Teachers who prefer integrated subject matter through thematic approaches are finding CIRC to be the integrating management tool.

Cooperative Learning for ESL and Transition into English

For LEP students, CL methods offer a Natural Approach (Krashen, 1981) rich with language experiences that integrate speaking, listening, reading, and writing. The activities tap the student's cultural background and make these experiences meaningful, relevant, and interesting to the students. When these activities are structured for ESL instruction, they can help students develop proficiency in English efficiently and effectively.

Simple CL activities such as Roundtable, Numbered Heads Together, and Concept Cards can be used to develop concepts and vocabulary in a fun and meaningful way. However, communicative competence is more likely to occur when students learn to do Team Problem Solving, Group Investigation, or Cooperative Integrated Reading and Composition.

Moving beyond the simple cooperative strategies, the Ysleta project has adapted the CIRC process to the Macmillan Transitional Reading Series (Tinajero and Long, 1989) by merging the basal reader's activities with CIRC strategies and by developing treasure hunts for each of the stories contained in the basal. Treasure hunts are also being developed for the most widely used children's literature in Spanish and English at each grade level.

Since students first learn the CIRC process through their reading in the primary language, they can later concentrate on enjoying the stories, getting creative with their writing in their second language, and feeling proud of their daily products and successes.

Cooperative Learning for Sheltered Instruction and Critical Thinking

Sheltered instruction is a term used to describe instructional practices or programs where LEP students receive content instruction (algebra, science, biology, etc.) in English with a teacher who uses specific techniques to teach that content. The content curriculum is never watered down. Rather, the teacher uses modified speech, many visuals, manipulatives, step-by-step procedures, constant checking for understanding through performance signs, and a variety of cooperative learning strategies (Calderón, 1989).

Cooperative Learning for Developing Cognitive and Metacognitive Strategies

During CL activities LEP students learn cognitive and metacognitive strategies critical to their life-long pursuit of knowledge. LEP students learn how to ask for help, give help, solicit opinions, present rationale, argue, defend, synthesize, listen to others, and ask relevant questions. After CL activities, with the assistance of a well-trained teacher, LEP students learn how to talk about their thinking strategies; they discuss task analysis, effective ways to complete a task, strategies to use and to avoid; and how to organize and improve learning strategies. Formal CL methods give the LEP students a natural and normal progression from team-created learning to independent learning and academic success.

Cooperative Learning for Classrooms with Few LEP Students

Cooperative learning offers a **"sheltered instruction"** environment for language minority students when they are placed in mainstreamed classrooms. When there is a shortage of bilingual teachers, cooperative learning structures can help students develop their full potential through the assistance of more capable peers (Vygotsky, 1978), provided that the teachers are well trained. In this type of classroom, LEP students are able to develop communicative competence and higher order thinking skills in a context of self-exploration and safe experimentation.

LEP students feel less intimidated or threatened in this **low-affective filter** environment where there is **comprehensible input** and **quality output** on a continuous basis. In this setting, more learning actually takes place. When cooperative teams are well structured, there is no place for any student to hide, no way not to contribute. Everyone helps; everyone asks for help. There is a shared understanding that mistakes are normal, natural and necessary.

In well-structured cooperative learning classrooms, there is a place for

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competitive and individualistic goal structures. In addition to cooperative skills, students learn how to compete and how to work independently. The natural place for competitive and individualistic efforts is within the umbrella of cooperation. Cooperative learning teachers weave the three structures together, setting up individual responsibility, peer-assisted performance or reciprocal teaching, competition, and cooperation.

What Cooperative Learning Is Not

Because CL is becoming very popular, many teachers are quick to point out, "Oh, I've been doing CL for the past ten years," or I've tried CL and it doesn't work with these kids." Upon observations of their CL lesson, it is easy to distinguish between "group activities" and actual CL lessons that meet specific criteria. When these criteria are not incorporated into CL activities, discipline problems emerge, students have problems participating or cooperating, others copy the bright or dominant student's work, or only low-level learning occurs in those structures. Therefore, it is important to point out what CL is not in order to avoid problems of effective implementation.

1. Cooperative learning is not "playing games." Students, teachers, and administrators need to understand the principles and theories behind CL.
2. CL is not placing students in groups with an assigned task. Social rules, roles, procedures, processing strategies, and classroom protocols are among the things that need to be taught in order for groups to function effectively.
3. CL is not a series of activities or techniques. Rather, it is a way of thinking and interacting.
4. CL is not just offering teachers a one-shot inservice on CL without curriculum, coaching, and support systems for effective implementation.
5. CL is not just a strategy for students. The role of the teacher requires redefinition.

The Instructional Models

Cooperative learning has several views and models. The ones most widely known and founded on a research base are the following: (1) conceptual approaches to be adapted by users (Johnson and Johnson, 1975-88); (2) conceptual and teaching strategies (Slavin, 1983-89); (3) content-based formats for math and science for grades 2-4 (Cohen and De Avila, 1983); (4) activities, strategies, and approaches which have been compiled, but for the most part, have not been empirically tested or have not demonstrated success; and (5) in bilingual settings, the CL approach trains teachers how to develop a conceptual base, a repertoire of teaching strategies, and how to use curriculum packages for LEP and non-LEP students.

CL In Bilingual Settings Approach

The approaches above have much to offer bilingual and multilingual classroom settings. However, curriculum and instructional adaptation have been the biggest drawbacks for teachers of language minority students in using these strategies. Two models have targeted bilingual classroom settings as their particular focus. The first is Group Investigation and the second is Cooperative Integrated Reading and Composition.

The Group Investigation method (Sharan and Hertz-Lazarowitz, 1980) has been used in Israel in bilingual classrooms for many years. This approach trains teachers to be effective mediators of student interaction and higher order thinking. It prepares teachers and administrators to create cooperative study groups at schools and trains teachers to be trainers of other teachers. The Group Investigation model is for teachers who want to develop higher order cognitive processes. In several experiments conducted by Sharan and Hertz-Lazarowitz (1980) and Hertz-Lazarowitz (in press), students displayed significantly higher achievement scores, high level thinking, creative thinking, and social relations.

This model assumes that social interaction and communication play a vital role in the students' construction of meaning and knowledge. Group Investigation consists of the following stages:

Stage 1. Identifying the topic and organizing students into research groups.
Stage 2. Planning the learning task.
Stage 3. Carrying out the investigation.
Stage 4. Preparing the final report.

Each stage consists of several substeps and procedures, ensuring that students learn to cooperate at high levels at each stage.

Group Investigation is particularly useful for programs that use thematic units for their instruction. It is an exciting and challenging way to teach science, social studies, literature, and any other subject.

The second model for LEP students which is currently being implemented in the Ysleta Independent School District in El Paso, Texas is called Cooperative Integrated Reading and Composition (CIRC). The principle features of CIRC (Stevens, Madden, Slavin and Farnish, 1987) proceed from an analysis of recent research on effective reading, writing, and language instruction. This program has been successful in accelerating the reading comprehension, language skills, and writing performance of students.

The **Bilingual CIRC,** which is the focus of researchers from Johns Hopkins and the University of California at Santa Barbara, The University of Texas at El Paso, and Haifa University is based on principles of first and second language acquisition (Cummins, 1981; Krashen, 1981), literacy development for language minority students (Durán, 1987; Goodman, 1982; Smith, 1982; Trueba, 1987; Moll, 1986; Vygotsky, 1978 and in press; Tinajero and Calderón, 1988), and in staff development programs for bilingual settings (Hertz-Lazarowitz, 1980; Calderón, 1984, 1986, and 1988).

The Bilingual CIRC program consists of three principal elements: basal-related or literature-related activities, direct instruction in reading comprehension, and integrated language arts/reading/writing. In all of these activities, students work in heterogeneous learning teams. All activities follow a regular cycle that involves teacher presentation, team practice, independent

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practice, peer pre-assessment, additional practice, and testing. Some of the highlights of CIRC are *Partner Reading, Treasure Hunts, Story Retell, and Story-Related Writing*. The Writing Process of CIRC has taken the basic principles and best tested practices from several writing processes.

CIRC is a language arts/reading/writing management program that enables bilingual teachers to keep track of their English, Spanish, and transitional readers in an efficient and effective manner. Students are engaged in meaningful and challenging activities at all times, and time on reading increases as much as 500%. The Bilingual CIRC management system helps teachers integrate the district's assessment procedures and accountability measures as well as develop other skills in students. Next year, bilingual teachers will begin exploring the use of CIRC with subject matter reading such as social studies, science, etc. through thematic units and as an integrated approach with the Group Investigation method.

In order for CL to work in classrooms where there are language minority students, a school must adopt the following philosophy, methods, and process for teacher training and implementation.

Philosophy

First, CL is **a mind set**. It is a belief that the social development of intelligence is the mechanism that ultimately produces observed benefits. Teachers and administrators believe in CL and they themselves practice collegial coaching and collaborative planning for instructional improvement. Second, the **spirit of positive** interaction and positive self-esteem permeates all learning environments. Third, there is a belief that students' cognitive, social, and moral development can be achieved to a greater extent through **group work**. Central to the use of CL is Vygotsky's theory that human beings are thoroughly social. From the moment of birth, we enter into social relations that shape and mold us. Fourth, a firm belief is held that bilingual instruction is **not isolating skills** for drill and practice nor routine, right-answer tasks, but rather group activities where students use their multiple abilities to explore open-ended questions. This is in contrast to the philosophy that teaching skills and subskills is the essence of linguistic or academic learning. The essence of a cooperative mind set is to allow children to create and communicate meaning and to learn to attain academic and social success through collaborative activities.

Procedures For Effective Implementation

1. *Preparing Students For Cooperative Work*

   The first step in starting CL is to prepare students for cooperative work situations. Most students have probably not had cooperative schooling experiences. Most cooperative tasks have been with friends, family members, or in sports. Therefore, it is important to explain that work in the world will require many tasks to be accomplished cooperatively with persons who are not personal friends or may be total strangers. Classroom norms must be established cooperatively for learning to work in groups. Students must be assisted in developing responsibility not only for their own behavior but for group behavior and the products of the group.

   In order to internalize the classroom norms for working in groups, students need to have social rules, roles for interdependence, problems to solve or products to develop and a process for self-monitoring and debriefing of cooperative strategies. These norms of interaction need to be modeled extensively at the beginning of the year, and modified as students learn to be more responsive to the needs of the group.

   Teaching specific cooperative behaviors and discourse involves on-going practice. Teachers should begin with simple cooperative activities that enable students to focus on developing cooperative skills. As skills improve, academic tasks should become more complex and challenging. Students need to learn social skills such as being polite to each other, helping, accepting, praising, encouraging, listening, asking for others' opinions, being concise, giving reasons for ideas, synthesizing ideas, reaching consensus, etc. Later, they can practice more complex protocols such as listening between the lines, neutralizing their own point of view, knowing when to interrupt and when to let go.

   Simultaneously, students are also practicing behaviors and discourse such as summarizing, generating questions, clarifying/asking questions, probing, and making/asking for predictions for reciprocal teaching of content (Palinscar, 1986 and 1987; Palinscar and Brown, 1984). Learners must concentrate on the material which they have been assigned and on themselves as learners, checking to see if the mental activities are resulting in learning. As a form of expert scaffolding, reciprocal teaching involves continuous trial and error on the part of the student, coupled with continuous adjustment on the part of the teacher to the students' current level of competence (Palinscar and Brown, 1984).

   In order for students to achieve competence in group work, certain principles must be followed:

   1. The teacher models the discourse and processes overtly, explicitly, and concretely in appropriate contexts of cooperative activities.
   2. Strategies for working and learning together and the range and utility of the strategies are discussed, and interventions and modifications are attempted by the students.
   3. Ineffective strategies and misconceptions about group work and individual participation are confronted.
   4. Debriefing activities where thinking is brought out into an open space where students and teacher can see it and learn from it are included in each cooperative learning activity.
   5. The responsibility for learning to work collaboratively and debriefing of that process should be transferred to the

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students as soon as they can take charge. The transfer should be gradual, working on one cooperative skill at a time until it is internalized.

6. Students should receive continuous feedback on their improvement.
7. Just as teachers need modeling, rationale, practice, feedback, and coaching, so do students.

2. *The Teacher's Role*

When teachers begin to use CL, they may feel very uneasy because they are "not teaching." Teachers suffer from this anxiety mostly when they believe that the teacher is expected to be a knowledge provider and manager of assessment and outcomes. It is important to explain to teachers that their **role has shifted from transmitters of knowledge to mediators of thinking.** It is also important for teachers to become involved in finding new ways of articulating CL instruction and assessment processes.

CL changes the teacher's role dramatically! The teacher becomes the **conductor** by setting up directions for the task, assigning students to teams, delineating social rules and student roles, modeling, teaching and monitoring the norms of interaction, and leading the debriefing after each activity. Cohen (1987) has found that if a teacher takes time to observe low achieving or low status students and praises them while they are making an intellectual or artistic contribution to the teams, they will do better and gain status in the group. This carefully planned monitoring and feedback is the basis of effective student cooperation and learning. The teacher does the bulk of the work prior to the lesson but then observes, learns about students, studies the process of the lesson, and reflects upon new ways of improving the next lesson.

3. *The Student's Roles*

Each student in a team must have a specific meaningful role assigned for each task. When roles are not assigned, it is natural for students to turn to the most academically capable student to do the task so that the team can get the right answer. Therefore, it is important to structure tasks that draw on a wide range of abilities. Students must be convinced that there are multiple intelligences and multiple abilities (Eisner, 1988) and that everyone has something special to contribute to a team product. Students also need to be convinced that they all have the responsibility for the learning of others and that in a work environment we must be mentors.

"It is important to explain to teachers that their role has shifted from transmitters of knowledge to mediators of thinking."

Individual accountability and group interdependence is built into group activities through specific roles for each team member. The tasks and products define the roles for each student in the team. Roles can be as simple as: time keeper, reporter, encourager, praiser, checker, artist, writer, or more complex such as monitor, creator/generator of ideas, critic, scribe, clarifier, consensus seeker, representative to the coordinating committee, etc. Individual accountability and group interdependence are built into group activities through specific roles for each team member.

One of the main functions of the CL classroom is to help students internalize their roles. They need to have descriptions of their roles, to practice playing those roles, and to receive feedback on how they performed those roles. A checklist for self-monitoring or viewing their performance on video tapes gives students feedback on their performance.

4. *Debriefing*

Debriefing is a specific strategy that must be incorporated into CL instruction. Debriefing enables students to reflect on their learning experiences, attach personal meanings to them, and deepen their understanding of the processes (Calderón, 1989). For Dewey (1933), reflection involved two stages: (1) a state of doubt or perplexity, and (2) inquiry and search for meaning to resolve the state of uncertainty. Hillkirk, Tome, and Wandress (1989) describe reflection as the second step in a learning process: (a) *experience* — the initial learning activity which involves the learner's behavior, ideas, and feelings; (b) *reflection* — conscious mental return to the experience to examine one's behavior, ideas and feelings; and (c) *outcomes* — development of new perspectives on the learning activity and its meaning for the learner.

Debriefing is a means for anchoring knowledge after an activity. Debriefing creates "meaning" for the learning activity and helps students remember more. During the process of debriefing, students develop cooperative and social skills and develop metacognitive strategies involving both knowledge and control of self. Here learners monitor their attitudes, attention, and engagement in a task.

Teachers need to set time aside after every lesson or main activity for students to debrief the content and process of that segment. Teachers must provide students with a structure, a set of procedures, key questions for content and process, or checklists and other tools. Sometimes it is important to stop at various intervals in a CL activity and debrief. This is particularly important at the beginning of the year when students are in need of learning strategies for accomplishing tasks and team building. Debriefing is probably the most comfortable and effective means of giving students feedback and providing for individual and team evaluation.

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5. *Evaluation*

Evaluation in CL is a combination of specific feedback on their performance, debriefing, and traditional grading so that students are well aware of their strengths and weaknesses in their academic, social, and linguistic dimensions.

Teachers can still give individual tests to measure student progress and learning. However, other dimensions are better measured through teacher observation tools: systematic scoring of desired interaction patterns; use of checklists by teacher or by students; student questionnaires, outside observers, video or audio recordings, and debriefing strategies.

Evaluating CL activities is situational. Subject matter, products, and specific teaching strategies call for modifications in evaluation procedures. At times, CL activities are used only for purposes of student independent practice, for reviewing before a test, or for working on a product that is part of a larger task. In this instance, the intrinsic motivation and the process speaks for itself. There is no need for formal evaluation methods since CL becomes the means and not an end in itself. When the goal is to teach specific cooperative skills, checklists on group behaviors and video analysis can be used. Other times, the product can be the focus of evaluation and letter grades or numerical scores can be assigned. Very complex bookkeeping systems are also available for individual and team scores but they entail considerable time and paperwork.

Whatever tool or criteria for evaluation is selected, the critical point is to state this clearly to the students prior to the activity. Along with numerical scores and feedback on team performance, it is vitally important to give praise to the students and to reward all students in some way. After the evaluation, give students time to review the results, to discuss and to reflect on ways to improve.

6. *Effective Implementation In Schools*

Simply placing students in groups and encouraging them to work together is not enough to produce learning gains. Teachers must be well trained in appropriate teaching strategies and classroom management techniques for organizing critical thinking, higher order questioning and debriefing strategies, as well as materials and curriculum adaptation. The literature on **innovation implementation** (Sharan and Hertz-Lazarowitz, 1980; Fullan, 1982; Joyce and Showers, 1987; Calderón, 1982 - 1988; Calderón and Marsh, 1989; Hall and Hord, 1987) states that in order for new teaching strategies to be fully implemented, teachers must receive support from administrators and peers and be involved in the decisions, adaptations, and the **training and coaching** of other teachers. If cooperative methods are to be fully implemented in a school, support systems for the teachers must be established and sustained over the school year for several years in order to see the benefits of cooperative learning.

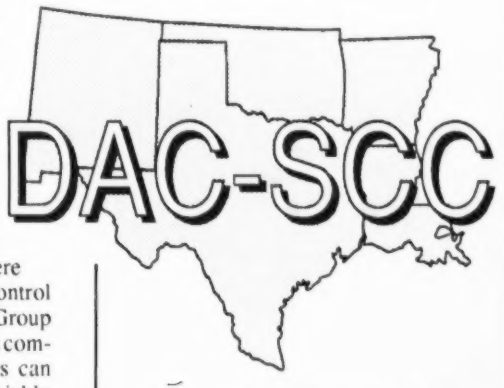
Five stages of implementation have been identified through a Concerns-Based Adoption Model's Stages of Concern, Levels of Use, and Innovation Configurations process (Hall and Hord, 1987; Sharan, Durán, and Hertz-Lazarowitz, 1979; Calderón, 1984; Calderón and Hertz-Lazarowitz, in press). These stages show the progression of teachers and students in several categories of instruction such as student social skill development, teaching strategies, monitoring and feedback, grading and evaluating, and quality of interaction. Several other ategories will be added this summer as additional data is analyzed and compared with findings from another study being conducted under the auspices of the Arizona State Department of Education (McCarty and Calderón, 1988 and in press).

This is the stage where teachers exhibit executive control of a myriad of CL strategies, Group Investigation, and the various components of CIRC. Teachers can combine methods, modify, quickly adapt and restructure different pieces, and improvise without fear. Students are still working on fine-tuning their cognitive processes and taking responsibility for their own learning.

The stage is set for anchoring social, academic, and linguistic skills. This is where teachers are the true facilitators of knowledge and mediators of thinking. Through inquiry processes, students can manage organizing very creative projects and are reaching unbelievable levels of information processing and transferring that information into real-life application.

7. *An Ecology For Professional Growth*

Perhaps the most significant contribution of the implementation of cooperative structures is that teachers and administrators develop an ecology for professional growth and instructional improvement. This has been evident in school districts such as Ysleta where a major effort has been made to develop cooperative schools and cooperative programs. The mind set of cooperation becomes the source for creating positive change and innovation. Although change does not come overnight, change becomes a desirable goal when colleagues have an opportunity to take control of organizing their learning. Addressing the needs of language minority students, and particularly LEP students becomes a cooperative and collegial effort - the cornerstone for future success.



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